Bedford 13692C

NH Route 101 over Pulpit Brook

Red List Bridge Effort

Bridge No. 090/065

Public Informational Meeting

February 13, 2018

KLEINFELDER
Bright People. Right Solutions.

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Agenda

- Welcome & Introductions
- Project Location
- Existing Conditions
- Natural & Cultural Resources Update
- Preferred Alternative
- Schedule & Construction Cost
- Questions and Comments

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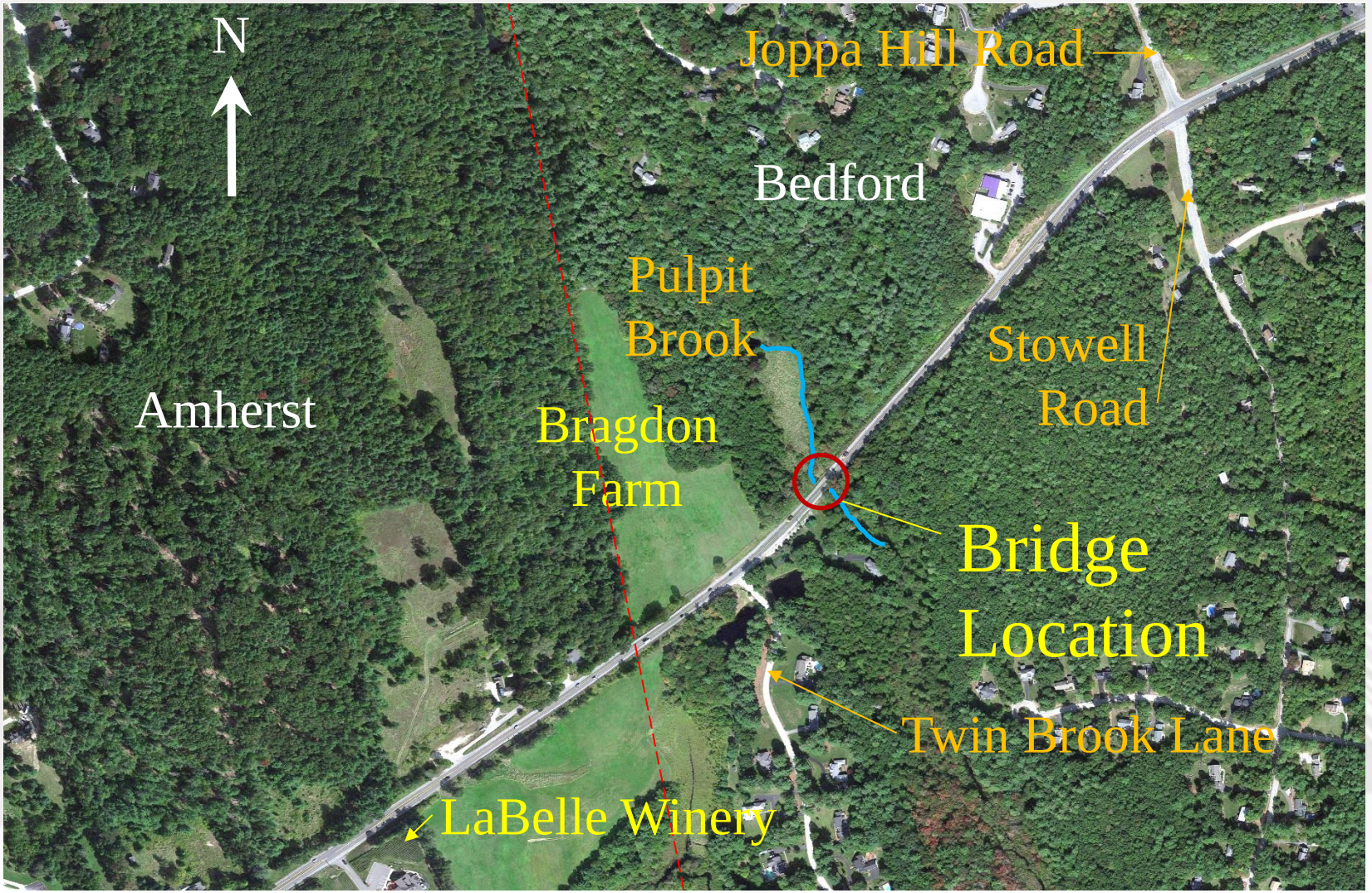
Project Location



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Site Photos

Looking Southwest on NH 101 (Bridge in Picture)

North Headwall

South Headwall

Roadway Overview – NH 101

- Constructed in 1951 (67 years old)
- Average Daily Traffic = 18,000 vehicles per day (2014)
- Posted Speed Limit = 50 mph
- Roadway width = 40 feet
  - 12-foot travel lanes
  - 8-foot shoulders
- 100’ Right-of-Way width

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Existing Bridge

- Twin 5’-0” Concrete Culverts
- Constructed in 1951 with roadway (67 years old)
- On New Hampshire DOT Red List
- Northern Headwall Replaced by Bridge Maintenance in 2011

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Existing Bridge Condition

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Natural/Cultural Resources Update

- Assessment of Natural and Cultural Resources for NEPA and Section 106 compliance
- Anticipated Natural Resource impacts to Pulpit Brook
  - Wetlands
  - Stormwater Treatment
  - Threatened and Endangered Species
- No anticipated impacts to Cultural Resources
- Interested persons or organizations can request “Consulting Party” status for Cultural Resources with FHWA

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Alternatives Analysis

1. Rehabilitation or No Build Options (Not Feasible)
   - Hydraulic Deficiencies (Route 101 will overtop in a 50-year storm)
2. Replacement Options
   - Phased Bridge Construction
   - Accelerated Bridge Construction (ABC) with Roadway Closure
   - Preferred Alternative – Conventional Construction with On-Site Traffic Diversion and Temporary Bridge

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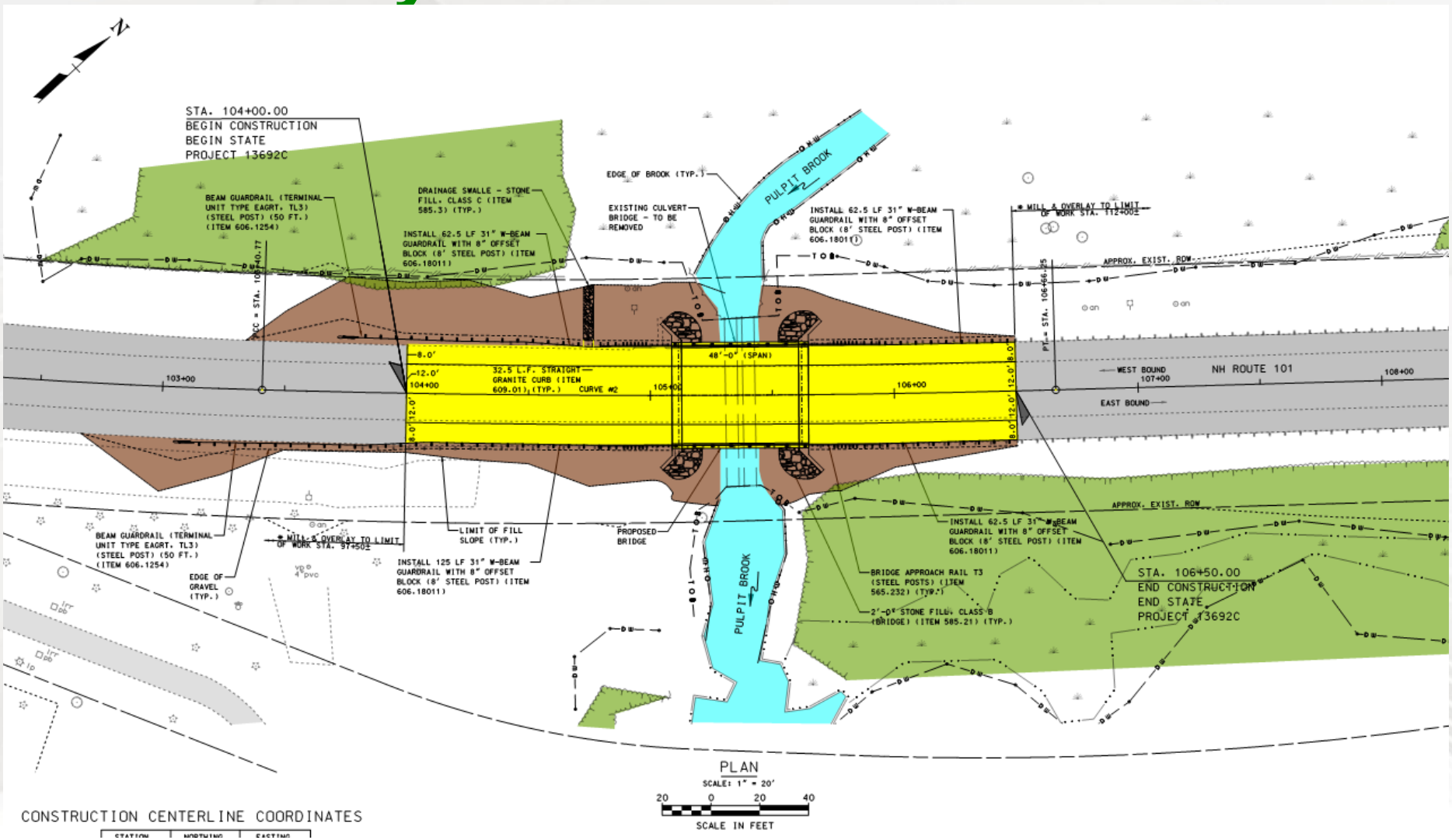
Roadway Plan



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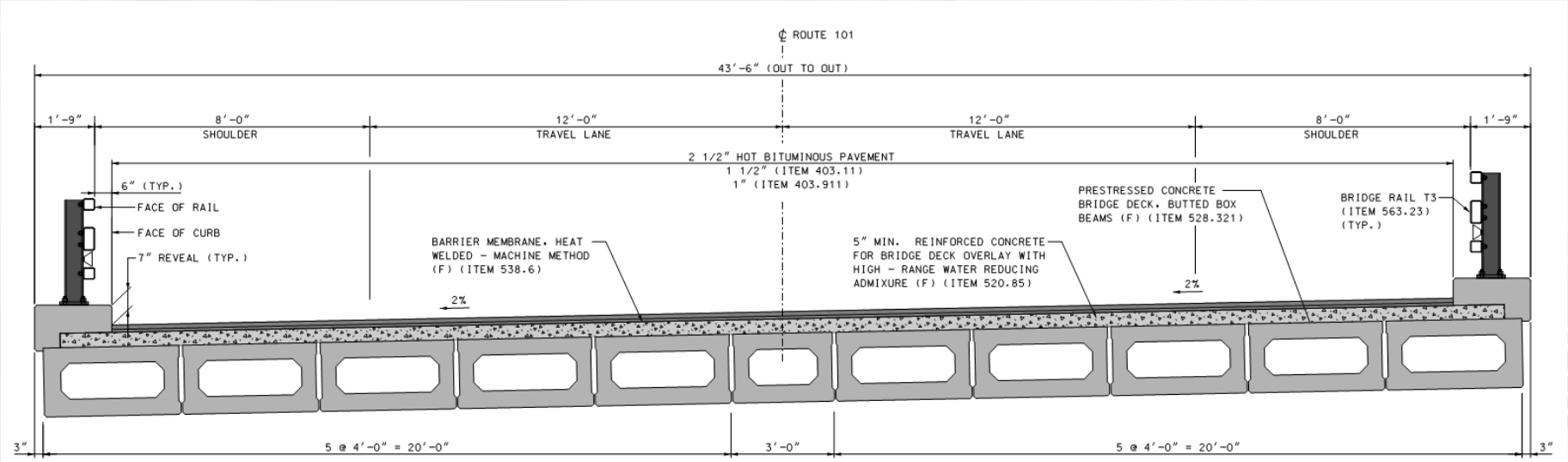
Preferred Alternative
Bridge Details

- 48-foot clear span
- Butted precast concrete box beams
- Conventional cast-in-place abutments and wingwalls



TRANSVERSE SECTION (ALTERNATIVE 1)
SCALE: 1/2″ = 1′-0″

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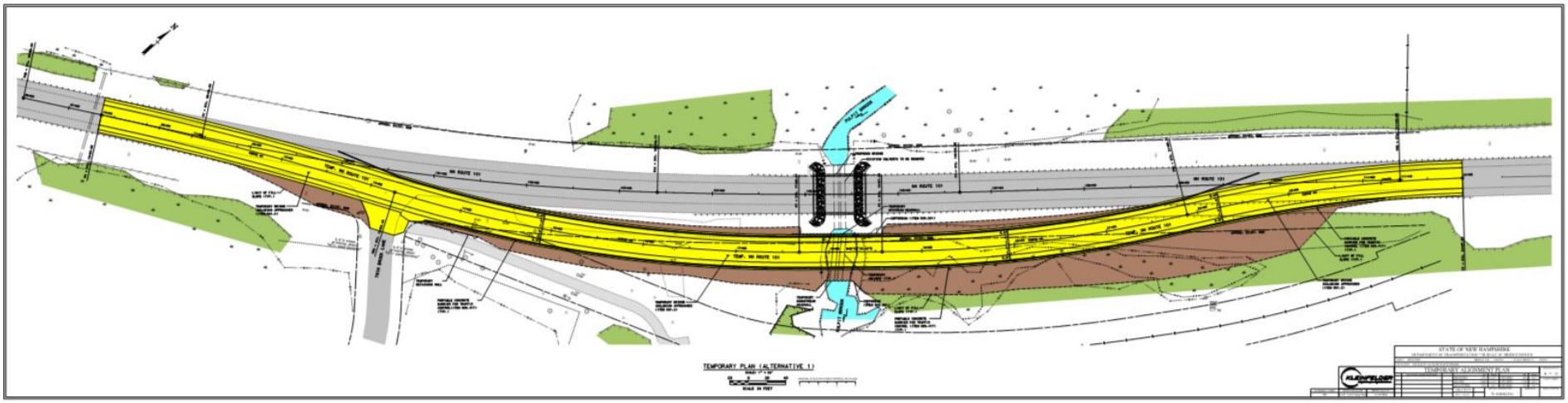
Preferred Alternative
Impacts

- Temporary on-site diversion
- Aerial utility relocations
- Public Hearing Required
  - ROW needed for stormwater treatment



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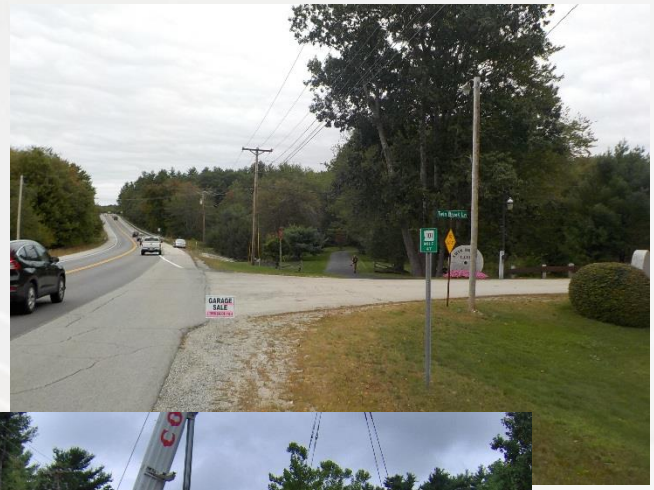
Preferred Alternative
Summary

- Advantages:
  - Least impact to the traveling public
  - Low maintenance structure

- Disadvantages:
  - Greater temporary ROW and environmental impacts
  - Longer construction duration
  - More expensive alternative



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Project Schedule and Cost

Schedule

- Public Hearing – Early Fall 2018
- Final Design – Winter 2019 – Spring 2020
- Advertising – Early Summer 2020
- Construction starting late 2020

Construction Cost Estimated at $2.2 million

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Thank You

Presentation Material is Available
on the Department's website

www.nh.gov/dot/projects
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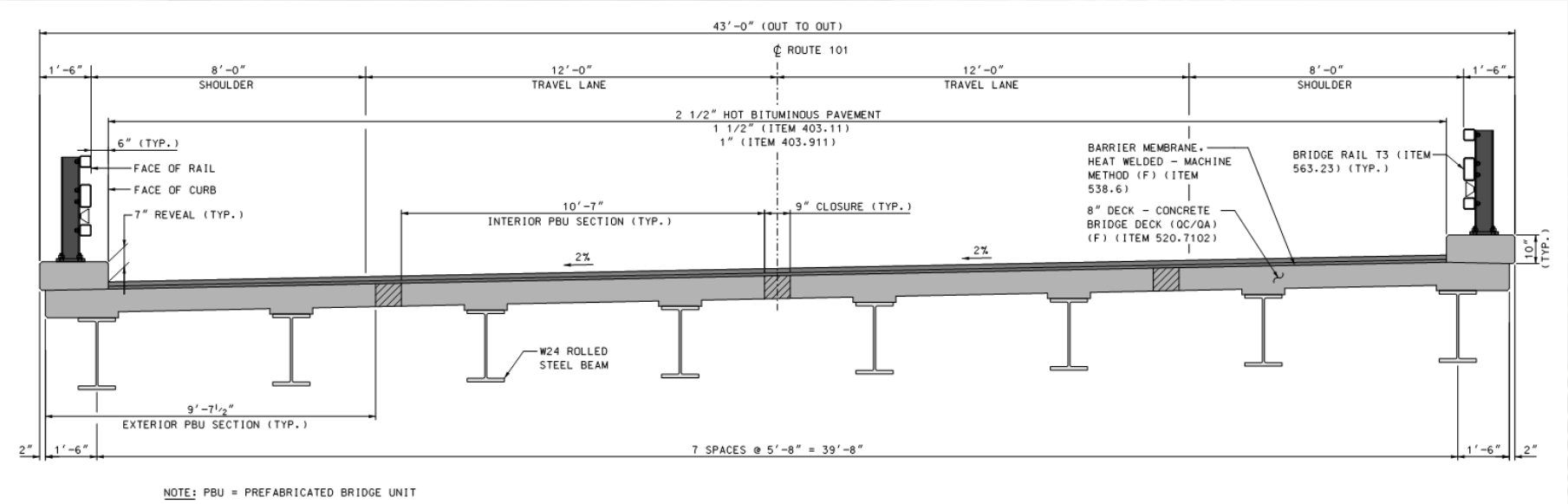
Accelerated Bridge Construction
Bridge Type

- 48-foot clear span
- Prefabricated Bridge Units (PBU's)
- Precast concrete abutment and wingwall components



NOTE: PBU = PREFABRICATED BRIDGE UNIT

TRANSVERSE SECTION (ALTERNATIVE 2)
SCALE: 1/2" = 1'-0"

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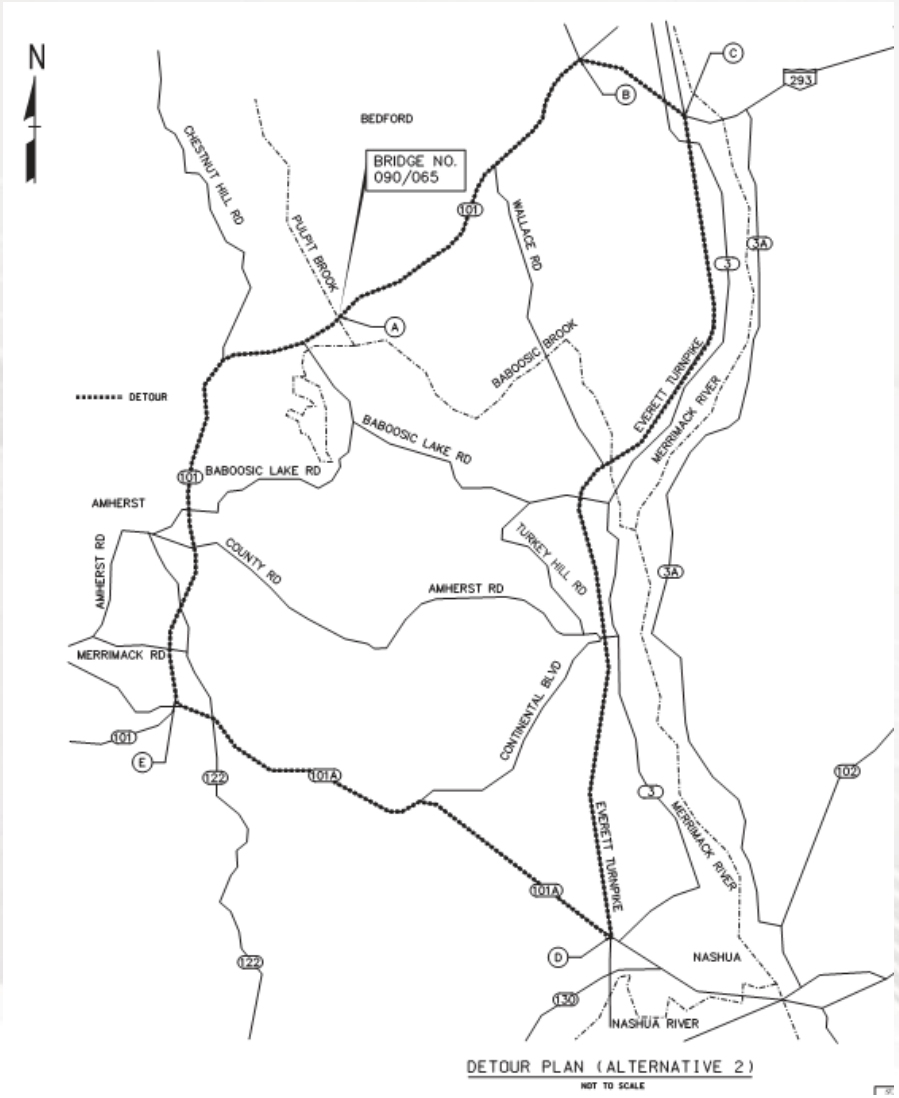
Accelerated Bridge Construction

Impacts

- Roadway closure - 34 miles on State Routes (tolls)
- Approximate 3-week bridge closure
- ROW needed for stormwater treatment
- Aerial utility relocations



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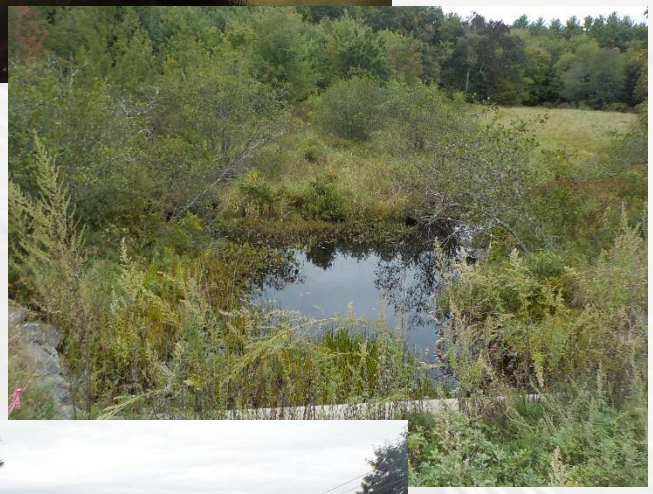
ABC Alternative
Summary

- Advantages:
  - Less expensive
  - Reduced ROW impacts
  - Reduced environmental impacts
  - Shorter construction duration

- Disadvantages:
  - Greater impact to traveling public during construction
  - Emergency vehicles will be detoured during short term Route 101 closure



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